Underground Injection Control Program
Inspection Report

Facility Information:

Facility Name: Quil Ceda Village
Facility Address: 8802 27th Ave NE, Tulalip, WA 98271-7433
Facility Mailing Address: 8802 27th Ave NE, Tulalip, WA 98271-7433
Facility Participants:
Tom McKinsey, Manager, Engineering Services, 360-716-5058
Thomas Gobin, Utilities Manager
Lukas Reyes, Utilities Superintendent
Fred McDonald, Engineering Services
John McCoy, General Manager

Inspection Date/Time: 6/26/08, 1:30 pm – 3:30 pm
Weather conditions: Overcast, but with some sunbreaks. Low to mid-60's.

EPA Inspectors: Jennifer Parker, EPA, UIC Class V Inspector, and Calvin Terada, EPA UIC Inspector

Purpose of Inspection:
This was an inspection to inspect records, files, papers, processes, controls and facilities to determine whether the Quil Ceda Village Class V injection wells for treated wastewater effluent are in compliance with the Safe Drinking Water Act.

Inspection Entry:

This was an announced inspection that was prearranged with Mr. Tom McKinsey through a phone call on 6/20/08. Jennifer Parker and Calvin Terada presented credentials to Mr. McKinsey and the other facility representatives (facility participants listed above) and provided the written Notice of Inspection in accordance with Section 1445(b) of the Safe Drinking Water Act. A copy of the Notice of Inspection was provided to Mr. McKinsey. After receiving the Notice of Inspection form, Mr. McKinsey and the other facility representatives agreed to show us around the facility.

Background:

The Quil Ceda Village injection wells began operation in 2003. 19 Class V injection wells were originally authorized by rule by EPA Region 10 for the time period March 17, 2003 through March 17, 2008 for injection of up to 250,000 gallons per day of treated effluent from the on-site wastewater treatment system. On February 7, 2008, EPA Region 10 re-authorized the same 19 injection wells for 5 more years until March 17, 2013, to inject up to 9,125,000 gallons of treated effluent per month (average of 300,000

gallons per day). The 2008 authorization by rule also included 3 additional injection wells for injection of up to 50,000 gallons per day of treated effluent into a pilot wetlands treatment project.

Onsite observations:

The facility representatives provided a site tour of the wastewater treatment plant and a site visit to the locations of the 22 injection wells.

The tour began at the wastewater treatment plant. The wastewater treatment plant has been operational for approximately 5 years. It is designed to accommodate up to 4 million gallons of effluent per day. The system relies on flat plate treatment through Kubota membrane filters. All 3 of the wastewater treatment plant operators are certified and the lead operator, Mr. Gobin, reports that he has approximately 30 years of experience operating wastewater treatment systems. Although the system is authorized to inject up to 9,125,000 gallons of treated effluent per month (average of 300,000 gallons per day), facility representatives report that flows have averaged 150,000 gallons per day, with peaks at 200,000 gallons per day. A new hotel opened at this site earlier this week (6/23/08) and wastewater volumes are expected to increase as a result; the facility representatives report that they are monitoring the volumes.

During the tour, questions were raised regarding floor drains that were present in the treatment plant facilities. Facility representatives reported that all floor drains within the treatment plant facilities drain to the headworks of the wastewater treatment plant, where any fluids received by the drains will run through the treatment system. Additional questions were asked about whether the treated effluent is used for nonpotable applications, such as landscape watering. The treatment plant uses effluent for landscaping purposes at this time, but no other facilities within Quil Ceda Village use it yet. In addition, facility representatives report that no chemicals are stored on site; they generate chlorine through an electrolysis process.

The wetlands project area was visited. The purpose of the project is to determine whether there are endocrine disruptors in the treated effluent, and if so, to find ways to bioremediate the effluent to remove endocrine disruptors so that the treated effluent can be used to recharge salmon-rearing streams. Local universities (University of Washington, Western Washington University) are assisting the Tulalip Tribes with the project. 3 test cells are in use for the project. A total of 3 inventoried Class V injection wells are included in the test cells. The study is centered on whether bacteria at the root levels of plants can degrade the endocrine disruptors or any nitrate residuals that may exist in the effluent.

The locations of the other 19 injection wells were visited. The 19 injection wells are located in a north-south line along the eastern edge of Quil Ceda Boulevard, to the east of the curb along the street. The average depth to ground water in Quil Ceda Village is approximately 3-7 feet below ground surface, but closer to I-5, the depth increases to approximately 15 feet below ground surface. Groundwater flows toward Quil Ceda

Creek to the east. The injection wells are located in the zone of deeper groundwater, on the side of the street closer to I-5. The UIC wells are located along the length of the boulevard, from the north side of Chelsea Mall to the south side of Wal-mart. Photos and maps of the 19 wells were submitted to EPA in 2003, 2006, and 2007, and are included in the UIC file for this facility. Additional diagrams were provided by the facility representatives during this site inspection.

Facility representatives report that they operate 3-5 wells (out of the 19 wells) at a time, for a period of approximately 3-6 months. At the end of the 3-6 month time period, the active wells are turned off and another 3-5 wells are turned on. On 6/26/08, 5 of the wells were operational. Facility representatives report that they may need to increase the number of operational wells in response to the opening of the hotel on site this week.

Facility representatives opened the cover of a well vault for inspection of the injection control system. A 3 inch pipe carries the treated effluent from the wastewater system to the drainfield (injection well) located 2 feet below the ground surface. A pressure valve monitors the fluid pressure in the 3 inch pipe. Facility representatives reported that a number of cars have "hopped the curb" and run over the vault covers. A monitoring well was located next to the vault that was inspected. On the side of the monitoring well away from the vault there was another rectangular box that was used for viewing site conditions under the surface on the day of the inspection. The facility representatives opened the plastic cap of the box for viewing purposes. Standing water was observed in the viewing box through the open plastic cap. Facility representatives report that they turn on more injection wells when standing water is observed in the viewing box. Water was not running out of the boxes or down the road during the inspection.

Conclusions:

Facility representatives were asked if they are required to complete and submit reports to the UIC program. Facility representatives explained that they complete monthly and quarterly reports that are maintained on-site. They also keep files on site of the weekly analytical testing of the effluent. EPA inspectors asked to see examples of the reports that are maintained. Reports dated January 2008 and November 2007 were randomly selected. Facility representatives provided copies of both to the EPA.

In addition, facility representatives provided information in response to a concern noted by EPA in the March 7, 2008 letter that was sent to Quil Ceda Village regarding the 5-year authorization by rule. The EPA letter noted that the laboratory used for this project, CCI Analytical, has a state accreditation for analyses under the Clean Water Act, but is not on the State list of Drinking Water Certified labs. Tom Gobin reported that CCI Analytical sends the samples for fecal analyses to another laboratory that is accredited for drinking water analyses. Mr. Gobin explained that they are requesting information in writing from CCI Analytical regarding this matter.

Follow-up Items:
None noted or observed

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 900
Seattle, Washington 98101-3140

Notice of Inspection – Underground Injection Control Program

Date: 6/26/08 Time: 1:30 a.m. / (p.m.)

Company Name & Address:

The Consolidated Borough of Quil Ceda Village
8802 27th Ave, NE
Tulalip, WA 98271-9694

Inspector Name & Title:

Jennifer Parker, Inspector
CALVINTERADA, INSPECTOR

Inspector Signature:

Jennifer Parker

Notice of Inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. § 300 (f) et seq.)

Reason of Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and/or obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water (SDWA) and the Resource Conservation and Recovery Acts and any applicable permit or rule.

Section 1445(b)(1) of the SDWA (42 U.S.C. § 300 j-4(b)(1)) is quoted on the back of this notice.

Section 1445(b)(1) of the Safe Drinking Water Act

Except as provided in paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials and a written notice to any supplier of water or other person subject to (A) a national primary drinking water regulation prescribed under section 1412, (B) an applicable underground injection control program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.